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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/822,625	03/30/2001	Srinivas Gutta	US010124	7123

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS
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EXAMINER

ENG, GEORGE

ART UNIT PAPER NUMBER

2643

DATE MAILED: 12/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/822,625

Applicant(s)

GUTTA ET AL.

Examiner

George Eng

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 November 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 5-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 5-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/12/2003 (paper no. 11) has been entered.

Response to Amendment

2. This Office action is in response to the amendment filed 9/24/2003 (paper no. 9).

Claim Rejections - 35 USC § 112

3. Claims 1-2 and 5-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1 and 5, it is unclear whether the limitations “one of the images of the plurality of objects” and “the one image” are referred to the same or not.

Claims 2 and 6-8 are also rejected because of depending on claims 1 and 5, respectively, containing the same deficiency.

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Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-2 and 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davis, Jr. et al. (US PAT. 5,839,000 hereinafter Davis) in view of Paalsgaard et al. (WO 92/14982 hereinafter Paalsgaard).

Regarding claim 1, Davis discloses a device (10, figure 1) for remotely controlling a camera having a lens, the device comprising a monitor (20, figure 1) to display a field of view of the lens, detection means (12, figure 1) for determining a gaze by a viewer (16, figure 1), and control means (30, figure 1) for selectively adjusting a zoom and a focus of the lens in a direction of gaze (col.2 line 66 through col. 4 line 65). Davis differs from the claimed invention in not

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specifically teaching the field of view including images of a plurality of objects so that the detection means determines which one of the images of the plurality of objects is being gazed upon by the viewer and the control means adjusts the zoom and focus in direction of said one of the images of the plurality of objects. However, Paalsgaard teaches to control alignment by a gaze direction of a person with respect to a thing, i.e., one of images of a plurality of objects, so that a camera is adjusted to zoom and focus in a direction of the thing (page 8 line 5 through page 14 line 2), thereby it makes easily to align the camera with respect to a specific thing or target. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Davis in having the field of view including images of a plurality of objects so that the detection means determines which one of the images of the plurality of objects is being gazed upon by the viewer and the control means adjusts the zoom and focus in direction of said one of the images of the plurality of objects, as per teaching of Paalsgaard, because it makes easily to align the camera with respect to a specific thing or target.

Regarding claim 2, Paalsgaard teaches to selective adjust a pan orientation and a tilt orientation of the camera and the zoom and focus of the lens as a function of a movement of the thing (page 7 lines 9-30 and page 9 line 6 through page 11 line 9).

Regarding claim 5, Davis discloses a device (10, figure 1) for remotely controlling a camera having a lens, comprising a monitor (20, figure 1) to display a field of view of the lens, and a processor (12, 28 and 30) configured to determine a gaze by a view (16, figure 1), and selectively adjusting a zoom and a focus of the lens in a direction of gaze (col.2 line 66 through col. 4 line 65). Davis differs from the claimed invention in not specifically teaching the field of view including images of a plurality of objects so that the detection means determines which one

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of the images of the plurality of objects is being gazed upon by the viewer and the control means adjusts the zoom and focus in direction of said one of the images of the plurality of objects. However, Paalsgaard teaches to control alignment by a gaze direction of a person with respect to a thing, i.e., one of images of a plurality of objects, so that a camera is adjusted to zoom and focus in a direction of the thing (page 8 line 5 through page 14 line 2), thereby it makes easily to align the camera with respect to a specific thing or target. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Davis in having the field of view including images of a plurality of objects so that the detection means determines which one of the images of the plurality of objects is being gazed upon by the viewer and the control means adjusts the zoom and focus in direction of said one of the images of the plurality of objects, as per teaching of Paalsgaard, because it makes easily to align the camera with respect to a specific thing or target.

Regarding claim 6, the limitations of the claim are rejected as the same reasons set forth in claim 2.

6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Davis, Jr. et al. (US PAT. 5,839,000 hereinafter Davis) in view of Paalsgaard et al. (WO 92/14982 hereinafter Paalsgaard) as applied in claim 5 above, and further in view of Saruwatari (US PAT. 5,912,705).

Regarding claim 7, the combination of Davis and Paalsgaard differs from the claimed invention in not specifically teaching to use an outer corner of either eye as a reference to determine an orientation of the pupils of the viewer's eyes. However, Saruwatari teaches a photographing apparatus having a visual axis detecting means utilizing an outer corner of either

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eye as a reference to determine an orientation of the eyeball of a photographer in order to achieve a higher speed and a higher accuracy of recognition of a gazing point (col. 3 line 29 through col. 4 line 15). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the combination of Davis and Paalsgaard in using the outer corner of either eye as a reference to determine an orientation of the pupils of the viewer's eyes, as per teaching of Sarueatari, because it achieves a higher speed and a higher accuracy of recognition of a gazing point.

7. Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davis, Jr. et al. (US PAT. 5,839,000 hereinafter Davis) in view of Paalsgaard et al. (WO 92/14982 hereinafter Paalsgaard) as applied in claim 5 above, and further in view of Lyons et al. (US PAT. 6,411,209 hereinafter Lyons).

Regarding claims 8-9, the combination of Davis and Paalsgaard differs from the claimed invention in not specifically teaching to configure the processor to extract the one of the images of the plurality of objects from the field of view using a non-parametric model for background subtraction. However, Lyons teaches to use a non-parametric model to extract one image from the field of view for background subtraction in order to provide as output a set of regions, i.e., a specific object, of a video frame in a better quality (col. 4 line 52 through col. 5 line 8). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the combination of Davis and Paalsgaard in configuring the processor to extract the one of the images of the plurality of objects from the field of view using

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a non-parametric model for background subtraction, as per teaching of Lyons, because it provides as output a specific object of a video frame in a better quality.

Response to Arguments

8. Applicant's arguments with respect to claims 1-2 and 5-9 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Yamaguchi et al. (US PAT. 5,912,721) discloses a gaze detection apparatus enabling easy and rapid selection of information for use of the user's gaze point information (abstract and figure 31). Kodama (US PAT. 5,627,621) discloses a camera including a finder device for controlling a finder on a basis of the visual axis information of an operator (abstract). Takagi et al. (US PAT. 5,245,381) discloses to provide an eye gaze input camera, which is capable of performing a release operation without depressing a release button and with goof operability (col. 2 line 10 through col.5 line 51).

10. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington D.C. 20231

Or faxed to:

(703) 872-9306 (for Technology Center 2600 only)


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Hand delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington, V.A., Sixth Floor (Receptionist).

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Eng whose telephone number is 703-308-9555. The examiner can normally be reached on Tuesday to Friday from 7:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis A. Kuntz, can be reached on (703) 305-4870. The fax phone number for the organization where this application or proceeding is assigned is 703-308-6306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.


George Eng
Primary Examiner
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